

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Vicor-Westcor Division

Corporation for Manufacturing Excellence (Manex)

Westcor Applies Lean Principles To Power Operational Efficiency

Client Profile:

Westcor, a division of Vicor Corporation (headquartered in Andover, Massachusetts), is a power supply manufacturer employing 85 people based in Sunnyvale, California. Westcor designs and builds fan-cooled, configurable power supplies, incorporating Vicor's high-density DC-DC converters and accessory components. These power supplies are sold in a wide range of markets, including test and measurement, industrial production, telecommunications, medical, and military.

Situation:

Westcor power supplies are tailored to meet specific customer requirements. Given the numerous variables and complexity in manufacturing many variations of power supplies, the company wanted to simplify and streamline its assembly methodology. A major focus of the company's improvement efforts is an increase in quality control in the wake of recent new product introductions. With a top goal of integrating total quality management (TQM) into its manufacturing processes, the company chose to pursue lean training for its employees and contacted the Corporation for Manufacturing Excellence (Manex), a NIST MEP network affiliate, to conduct its lean/world class manufacturing program. Westcor knew about Manex's easy access to funding through California's Employment Training Panel (ETP). The training is customized to meet Westcor's individual needs.

Solution:

Manex led a five-day cellular/flow kaizen (process improvement system) event that focused on the work procedures of ten individuals in a specified manufacturing cell.

The new process improvement system involved major revisions to the existing work area and production system. Manex introduced the trainees to lean manufacturing concepts and instructed in phases of the implementation throughout each day. Changes to the work area involved the layout of new cells to accommodate improvement in cycle time, work-in-process inventory, takt time and workflow balance. To create the new cell layout, Manex moved workstations into a more compact "U" shaped arrangement which streamlines production and involves workers in each process of assembling a product. Manex grouped parts for assembly at the workstations so that they could be easily identified and accessed.

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Then the assembly of the two newest Westcor products was introduced using the new method. The revised plan freed up capital equipment that had been previously duplicated in two lines and reduced the number of workstations from eight to five. Manex then cross-trained workers so that there would be limited downtime as projects moved through production. Employees now work around problems to meet their daily goals without violating any of the processes. This has been a real paradigm shift--a huge cultural change for the company. An unanticipated added benefit is that the new system pushes all support structures within the company to improve response time and the quality of service.

Results:

Streamlined output for an 80 percent improvement in cycle time.

Improved work-in-process by 71 percent.

Saved between \$80,000-\$120,000 in man-hours to produce two different product lines.

Reduced required floor space by 65 percent with the new cell layout.

Saved approximately \$18,000 in capital equipment.

Established a new culture of employee motivation, involvement, and team empowerment.

Testimonial:

"What was accomplished here in one week with support from Manex is extremely valuable and worthwhile. In all my years of manufacturing, I do not recall output as tangible as what we just experienced. We are seeing visible, very positive changes in our staff and in the quality of our products."

Rick Brown, Vice President of Operations